EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	615	oxysterol	US-PGPUB; USPAT; USOCR; EPO; DERWENT	OR	ON	2007/06/07 22:06
L2	467	l1 and cholesterol	US-PGPUB; USPAT; USOCR; EPO; DERWENT	OR	ON	2007/06/07 22:06
L3	307	l2 and atheroscler$	US-PGPUB; USPAT; USOCR; EPO; DERWENT	OR	ON	2007/06/08 00:00
L4	151	l3 and transderm$	US-PGPUB; USPAT; USOCR; EPO; DERWENT	OR	ON	2007/06/08 01:32
L5	802	514/169.ccls.	US-PGPUB; USPAT; USOCR; EPO; DERWENT	OR	ON	2007/06/08 01:32
L6	8	l5 and oxysterol	US-PGPUB; USPAT; USOCR; EPO; DERWENT	OR	ON	2007/06/08 01:33
L7	8	l6 and cholest$	US-PGPUB; USPAT; USOCR; EPO; DERWENT	OR	ON	2007/06/08 01:33
L8	1	((LOUIS) near2 (KRUT)).INV.	US-PGPUB; USPAT; USOCR	OR	ON	2007/06/08 01:35

ANSWER 1 OF 13 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2002:31501 CAPLUS
DOCUMENT NUMBER: 136:80942
TITLE: A human 38.72 kilodalton oxysterol-binding protein-like protein, protein and cDNA sequences, recombinant production and therapeutic uses
INVENTOR(S): Mao, Yumin; Xie, Yi
PATENT ASSIGNEE(S): Biowindow Gene Development Inc. Shanghai, Peop. Rep. China
SOURCE: PCT Int. Appl., 36 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Chinese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002002613	A1	20020110	WO 2001-CN955	20010611 <--
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
CN 1328060	A	20011226	CN 2000-116516	20000614 <--
AU 2001095379	A5	20020114	AU 2001-95379	20010611 <--

PRIORITY APPLN. INFO.:			
CN 2000-116516	A	20000614	
WO 2001-CN955	W	20010611	

AB The invention relates to a human oxysterol-binding protein-like protein. The open reading frame of the cDNA encodes a protein with 352 amino acids, and an estimated mol. weight of 38.72 kilodalton based on SDS-PAGE. The invention provides the use of polypeptide and polynucleotide in a method for treatment of various kinds of diseases, such as cancer, blood disease, HIV infection, cholesterol metabolism-related disease, immune diseases, and inflammation. The invention also relates to methods, expression vectors and host cells for recombinant production of said oxysterol-binding protein-like protein. The invention also relates to agonist and antagonist of said oxysterol-binding protein-like protein and uses in therapy. The invention found that the expression profile of said oxysterol-binding protein-like protein in some animal cell lines and cancer tissues was similar to that of human oxysterol-binding protein.
REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 2 OF 13 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2001:126036 CAPLUS
DOCUMENT NUMBER: 134:220225
TITLE: Evidence that the major oxysterols in human circulation originate from distinct pools of cholesterol: a stable isotope study
AUTHOR(S): Meaney, Steve; Hassan, Moustapha; Sakinis, Augustinas; Lutjohann, Dieter; Von Bergmann, Klaus; Wennmalm, Ake; Diczfalusy, Ulf; Bjorkhem, Ingemar
CORPORATE SOURCE: Divisions of Clinical Chemistry Karolinska Institutet, Huddinge University Hospital, Huddinge, SE-141 86, Swed.
SOURCE: Journal of Lipid Research (2001), 42(1), 70-78
CODEN: JLPRAW; ISSN: 0022-2275

PUBLISHER: Lipid Research, Inc.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The major oxysterols in human circulation are 7α-, 27-, and (24S)-hydroxycholesterol. Two unique expts. were performed to elucidate their origin and kinetics. A volunteer was exposed to 18O2-enriched air. A rapid incorporation of 18O in both 7α- and 27-hydroxycholesterol and disappearance of label after exposure were observed The half-life was estimated to be less than 1 h. Incorporation of 18O in (24S)-hydroxycholesterol was not significant. In the second experiment a volunteer was infused with liposomes containing 10 g of [2H6]cholesterol. This resulted in an enrichment of plasma cholesterol with 2H of up to 13%, and less than 0.5% in cerebrospinal fluid cholesterol . The content of 2H in circulating 7α-hydroxycholesterol remained approx. equal to that of plasma cholesterol and decreased with a half-life of about 13 days. The 2H content of circulating 27-hydroxycholesterol was initially lower than that of cholesterol but in the last phase of the experiment it exceeded that of cholesterol . No significant incorporation of 2H in (24S)-hydroxycholesterol was observed It is evident that 7α-hydroxycholesterol must originate from a rapidly miscible pool, about 80% of 27-hydroxycholesterol from a more slowly exchangeable pool, and more than 90% of (24S)-hydroxycholesterol from a nonexchangeable pool, presumably the brain. The results are discussed in relation to the role of oxysterols in cholesterol homeostasis and their use as markers for pathol. conditions.

REFERENCE COUNT: 40 THERE ARE 40 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 3 OF 13 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2001:50492 CAPLUS
DOCUMENT NUMBER: 134:110468
TITLE: Use of liver X receptors for raising HDL cholesterol levels
INVENTOR(S): Shan, Bei
PATENT ASSIGNEE(S): Tularik Inc., USA
SOURCE: PCT Int. Appl., 56 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001003705	A1	20010118	WO 2000-US18533	20000707 <--
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
CA 2377999	A1	20010118	CA 2000-2377999	20000707 <--
EP 1212065	A1	20020612	EP 2000-947080	20000707 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL				
JP 2004500332	T	20040108	JP 2001-508985	20000707

PRIORITY APPLN. INFO.:		
US 1999-142994P	P	19990708
US 2000-612135	A	20000707
WO 2000-US18533	W	20000707

OTHER SOURCE(S): MARPAT 134:110468

AB The present invention relates to liver X receptors (LXR) agonists and to methods of using such LXR agonists to raise high d. lipoprotein (HDL) plasma levels in mammals and to prevent, halt or slow the progression of atherosclerotic cardiovascular diseases and related conditions. Oral administration of 5 or 50 mg/kg/day of T0901317 to mice for two weeks resulted in an increase in HDL cholesterol level.

REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 4 OF 13 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1999:673437 CAPLUS
DOCUMENT NUMBER: 131:334909
TITLE: Rapid hepatic metabolism of 7-ketocholesterol in vivo: implications for dietary oxysterols
AUTHOR(S): Lyons, Malcolm A.; Samman, Samir; Gatto, Lissa; Brown, Andrew J.
CORPORATE SOURCE: Cell Biology Group, Heart Research Institute, Camperdown, 2050, Australia
SOURCE: Journal of Lipid Research (1999), 40(10), 1846-1857
CODEN: JLPRAW; ISSN: 0022-2275
PUBLISHER: Lipid Research, Inc.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The 7-ketocholesterol is a major dietary oxysterol and the predominant non-enzymically formed oxysterol in human atherosclerotic plaques. It may be preferentially retained by tissues relative to cholesterol in vivo. To ensure rapid tissue uptake, acetylated low-d. lipoproteins labeled with esters of [14C]-7-ketocholesterol and [3H]cholesterol were injected i.v. into rats via a jugular catheter. At timed intervals (2 min to 24 h) the rat tissues were assayed for radioactivity. In 2 expts. the majority of both radiolabels appeared in the liver after 2 min. In all tissues, 14C appeared transiently and did not accumulate. It was metabolized in the liver and excreted into the intestine mainly as water-soluble metabolites (presumably bile acids). By 9 h, 14C in the liver had decreased to 10% of the injected dose, while 36% was present in the intestine. By 9 h, 38% of 3H was evident in the liver while only 5% was in the intestine. Unlike [3H]cholesterol, little 14C reentered the circulation, indicating that enterohepatic recycling of 7-ketocholesterol was negligible. This shows the distribution of an oxysterol related to cholesterol when administered simultaneously in a whole animal model. Since [14C]-7-ketocholesterol was rapidly metabolized and excreted by the liver, diet may not be a major source of oxysterols in atherosclerotic plaques and dietary oxysterols may make little or no contribution to atherogenesis.

REFERENCE COUNT: 54 THERE ARE 54 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 5 OF 13 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1999:468052 CAPLUS
DOCUMENT NUMBER: 131:125471
TITLE: Oxysterol inhibition of dietary cholesterol uptake
INVENTOR(S): Haines, Milton
PATENT ASSIGNEE(S): University of Western Ontario, Can.
SOURCE: U.S., 10 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5929062	A	19990727	US 1997-878731	19970619 <--

PRIORITY APPLN. INFO.: US 1997-878731 19970619

AB A composition useful for inhibition of cholesterol absorption from the diet is provided. The composition comprises a pharmaceutically acceptable combination of one or more oxysterols and a suitable carrier. The oxysterol composition can be used therapeutically, prescribed to individuals who are required to reduce cholesterol intake. Alternatively, the composition can used as a dietary supplement by any individual desiring to moderate cholesterol intake.

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 6 OF 13 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1997:560735 CAPLUS

DOCUMENT NUMBER: 127:220040

TITLE: Absorption of dietary cholesterol oxidation products and incorporation into rat lymph chylomicrons

AUTHOR(S): Vine, D. F.; Croft, K. D.; Beilin, L. J.; Mamo, J. C. L.

CORPORATE SOURCE: Department of Medicine, Royal Perth Hospital, University of Western Australia, Perth, 6000, Australia

SOURCE: Lipids (1997), 32(8), 887-893
CODEN: LPDSAP; ISSN: 0024-4201

PUBLISHER: AOCS Press

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Cholesterol oxidation products (oxysterols) induce macrophage lipid loading and accumulate in early arterial fatty streaks. The origin of oxysterols in the arterial lesions has not been elucidated. The absorption of oxysterols from the diet and their transport to the arterial wall by postprandial lipoprotein remnants may be a significant source. The extent of oxysterols absorption and their effect on chylomicron composition were studied. Cholesterol was heated at 135°C for 10 h to reach 30% autoxidn.; the major oxidation products were 7β-hydroxycholesterol, 7-ketocholesterol, 5α,6α-epoxycholesterol, and 5β,6β-epoxycholesterol as determined by GC-MS. Conscious lymphatic duct-cannulated rats were given bolus gastric infusions of 50 mg oxidized cholesterol mix or 50 mg purified cholesterol in a triglyceride vehiculum. In rats given the oxidized cholesterols, 6% of the oxysterol load was absorbed and incorporated into lymph chylomicrons. Rats given pure cholesterol had no increase in chylomicron oxysterols above the baseline levels. The incorporation of oxysterols into lymph chylomicrons differed over time with 7β-hydroxycholesterol, having the peak absorption at 3 h, followed by 7-ketocholesterol at 4 h, and by 5α,6α-epoxycholesterol at 5 h. The absorption of oxysterols in animals given the oxidized cholesterol mix was associated with lymph chylomicron compositional changes at 2-4 h. The oxidized cholesterol -treated group had a 2-fold increase in the lymph absorption of cholesterol (890 ± 84 μg vs. 440 ± 83 μg at 3 h) and triglycerides (19.76 ± 3.4 μg vs. 8.49 ± 3.8 μg at 3 h). This led to a doubling of chylomicron size over this postprandial period, with particles having a mean diameter of 294 nm in the oxidized cholesterol-treated animals, compared to 179 nm in the purified cholesterol group. Thus, dietary oxysterols appear to influence postprandial lipoprotein particle size and composition These changes may affect the clearance of chylomicrons from blood plasma, arterial delivery of oxysterols, and possible deposition in arterial lesions.

REFERENCE COUNT: 44 THERE ARE 44 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 7 OF 13 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1997:433949 CAPLUS
DOCUMENT NUMBER: 127:117127
TITLE: Evaluation of the cytotoxic effects of some oxysterols and of cholesterol on endothelial cell growth: methodological aspects
AUTHOR(S): Lizard, G.; Gueldry, S.; Deckert, V.; Gambert, P.; Lagrost, L.
CORPORATE SOURCE: INSERM-CJF 93/10, Laboratoire de Biochimie Medicale, Hopital de Bocage, Dijon, 21034, Fr.
SOURCE: Pathologie Biologie (1997), 45(4), 281-290
CODEN: PTBIAN; ISSN: 0031-3009
PUBLISHER: Expansion Scientifique Francaise
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The effects of various oxysterol (7β-hydroxycholesterol, 7-ketocholesterol, 19-hydroxycholesterol, cholesterol -5α,6α-epoxide, and 25-hydroxycholesterol) and of cholesterol were investigated on cell growth of bovine aortic endothelial (BAE) cells by cell counting, MTT reduction, and 3H-thymidine incorporation in a 5 to 80 μg/mL concentration range. By cell counting, a dose related decrease in the number of adherent cells was observed with oxysterols; MTT reduction also indicated a decreased number of viable cells, and both method give similar IC50. A lower 3H-thymidine incorporation was generally detected with oxysterols but no effect on 3H-thymidine incorporation was found with 25-hydroxycholesterol. With cholesterol, no modification of cell growth was shown by cell counting and 3H-thymidine incorporation, whereas an important decrease in MTT reduction was observed Noteworthy, with the highest cholesterol concentration no change in cellular morphol. occurred, and no modification of mitochondrial activity was found with Rhodamine 123. It is concluded that MTT and 3H-thymidine incorporation are not suitable for the evaluation of a putative toxicity of cholesterol and 25-hydroxycholesterol, resp. Therefore, cell counting seems the most accurate method to determine the effects of oxysterols and of cholesterol and endothelial cell growth. The results are discussed in relation to the antiangiogenic activity of the oxysterols.

L14 ANSWER 8 OF 13 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1996:122906 CAPLUS
DOCUMENT NUMBER: 124:227680
TITLE: Esterification of oxysterols in human serum: effects on distribution and cellular uptake
AUTHOR(S): Lin, Chen-Yi; Morel, Diane W.
CORPORATE SOURCE: Dep. Biochemistry, Medical College Pennsylvania and Hahnemann Univ., Philadelphia, PA, 19129, USA
SOURCE: Journal of Lipid Research (1996), 37(1), 168-78
CODEN: JLPRAW; ISSN: 0022-2275
PUBLISHER: Lipid Research, Inc.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Oxysterols, oxidized derivs. of cholesterol, may enter the circulation as contaminants of cholesterol-containing food, arise through peroxidn. of lipoproteins, or be generated by enzymic reactions. They are found in serum associated either with lipoproteins or with albumin. In these studies, 25-hydroxycholesterol (25OHC) was used as a model oxysterol to investigate the effect of esterification on the association of oxysterols with serum components and their delivery to cultured cells. 25OHC added in vitro to fresh human serum was readily esterified during incubation at 37°C, most likely by serum lecithin:cholesterol acyltransferase (LCAT) as it was blocked by

known inhibitors of LCAT. The 25OHC-esters formed were identified as monoesters by comparing their elution on high performance liquid chromatog. and thin-layer chromatog. with that of chemical synthesized 25OHC mono- and diesters. Esterification doubled the percentage of 25OHC associated with lipoproteins, concomitantly decreasing the amount associated with albumin. Whereas unesterified 25OHC readily transferred between isolated lipoproteins, 25OHC-esters remained associated with donor lipoproteins unless human lipoprotein-deficient serum was added. That cholesteryl ester transfer protein (CETP) mediated transfer of 25OHC-esters was demonstrated by the ineffectiveness of rat lipoprotein-deficient serum as well as by the ability of IC-4, an anti-CETP monoclonal antibody, to suppress the transfer. Esterification of 25OHC in serum limited its entry into human erythrocytes and fibroblasts (GM 3468A cells) in vitro. Up-regulation of fibroblast low d. lipoprotein (LDL)-receptors enhanced the uptake of esterified 25OHC from medium but did little to enhance the total uptake of 25OHC. Thus, esterification of oxysterols in serum shifts their distribution away from albumin into LDL and high d. lipoprotein (HDL) and limits their availability to cells in culture.

L14 ANSWER 9 OF 13 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1996:85024 CAPLUS
DOCUMENT NUMBER: 124:197384
TITLE: Oxysterols: Determination by HPLC and MS in oxidized human LDL
AUTHOR(S): Galli, G.; Caruso, D.; Giavarini, F.; Toia, A.; Rasetti, M. F.
CORPORATE SOURCE: Institute Pharmacological Sciences, University Milan, Milan, Italy
SOURCE: Advances in Mass Spectrometry (1995), 13, 375-87
CODEN: AMSPAH; ISSN: 0568-000X
PUBLISHER: Wiley
DOCUMENT TYPE: Journal
LANGUAGE: English
AB An HPLC method for the separation and quantification of oxysterols formed during human low d. lipoprotein (LDL) oxidation in the presence of copper ion is reported. The presence of cholest-5-en-3β,7α-diol; cholest-5-en-3β,7β-diol; cholest-5-en-3β-ol-7-one; and 7-hydroperoxycholest-5-en-3β-ol was confirmed among the oxidation products.

L14 ANSWER 10 OF 13 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1995:889673 CAPLUS
DOCUMENT NUMBER: 123:284487
TITLE: Distribution of oxysterols in human serum: characterization of 25-hydroxycholesterol association with serum albumin
AUTHOR(S): Lin, Chen-Yi; Morel, Diane W.
CORPORATE SOURCE: Dep. Biochemistry, The Medical College Pennsylvania, Philadelphia, PA, USA
SOURCE: Journal of Nutritional Biochemistry (1995), 6(11), 618-25
CODEN: JNBIEL; ISSN: 0955-2863
PUBLISHER: Elsevier
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Oxysterols, derived either from cholesterol autoxidn. in vitro or through lipoprotein peroxidn. in vivo are biol. active compds. implicated in the pathogenesis of atherosclerosis. Using 25-hydroxycholesterol (25OHC) as a model and radiolabeled 25OHC to trace mass, in this study we examined the transport of oxysterols in human serum. In contrast to cholesterol, which is associated exclusively with serum lipoproteins, 55 to 75% of 25OHC added to serum in vitro was associated

with the lipoprotein-deficient fraction of serum (LPDS), (d. >1.21 g/mL) over a wide concentration range. Upon sequential gel filtration, ion-exchange chromatog., and nondenaturing polyacrylamide gel electrophoresis, 25OHC added to LPDS eluted in a single peak corresponding to a protein peak of mol. weight about 67 kD. Immunopptn. of serum albumin from LPDS also precipitated 25OHC. 25OHC added to albumin-depleted LPDS did not associate with any of the remaining serum proteins, suggesting that albumin is the sole protein with which 24OHC assocs. to any significant extent in LPDS. Bovine serum albumin (BSA) was used to characterize the association of 25OHC with albumin. Other oxysterols, including 19-hydroxycholesterol, 7β-hydroxycholesterol, and 7-keto-cholesterol, effectively competed with 25OHC for association with BSA, suggesting that they also associate with albumin in serum. The association of 25OHC with albumin in serum is selective but of low affinity as calculated from Scatchard anal. However, given the high concentration of albumin in serum a significant amount of serum oxysterols may be delivered to or removed from various tissues via albumin.

L14 ANSWER 11 OF 13 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1995:548452 CAPLUS
DOCUMENT NUMBER: 122:282906
TITLE: Oxysterol (7β-hydroxycholesteryl-3-oleate) promotes serotonergic reinnervation in the lesioned rat spinal cord by reducing glial reaction
AUTHOR(S): Gimenez y Ribotta, M.; Rajaofetra, N.; Morin-Richaud, C.; Alonso, G.; Bochelen, D.; Sandillon, F.; Legrand, A.; Mersel, M.; Privat, A.
CORPORATE SOURCE: Univ. of Montpellier II, Montpellier, Fr.
SOURCE: Journal of Neuroscience Research (1995), 41(1), 79-95
CODEN: JNREDK; ISSN: 0360-4012
PUBLISHER: Wiley-Liss
DOCUMENT TYPE: Journal
LANGUAGE: English
AB In the present study, following previous experience with electrolytic lesion of the rat brain, and subsequent reduction of reactive gliosis with 7β-hydroxy- cholesterol derivs. (Bochelen, D.; et al., 1992), the authors performed a hemisection of the spinal cord in adult rats and investigated the influence of oxysterol on the intensity of the astrocytic reaction and the axonal regeneration. The authors have shown here that local administration of liposomes containing this oxysterol reduced the intensity of the astroglial reaction on the sectioned side, as seen with immunocytochem. detection of glial fibrillary acidic protein (GFAP) and by in situ hybridization with a specific RNA probe. Moreover, radioautog. evaluation of astrocyte proliferation with tritiated thymidine evidenced a reduction of the astrocyte labeling index. In addition, double immunocytochem. detection of GFAP and polysialylated neural cell adhesion mol. (E-NCAM) revealed a decrease of the expression of this mol. in reactive astrocytes of the treated animals. Finally, immunocytochem. detection of serotonin was determined in the raphe spinal projections, which constitute a major descending system. In treated animals, serotonergic axons originating from the intact side reinnervated the dorsal horn of the sectioned side, below the hemisection. These results demonstrate that oxysterol can reduce the astrocytic reaction following spinal cord injury, promoting the serotonergic reinnervation of a denervated territory.

L14 ANSWER 12 OF 13 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1994:575911 CAPLUS
DOCUMENT NUMBER: 121:175911
TITLE: 7α Hydroxylation of 25-hydroxycholesterol in liver microsomes. Evidence that the enzyme involved is different from cholesterol

7α-hydroxylase
AUTHOR(S): Toll, Anders; Wikvall, Kjell; Sudjana-Sugiaman, Elly; Kondo, Kazu-Hiro; Bjoerkhem, Ingemar
CORPORATE SOURCE: Dep. Pharm. Biosci., Univ. Uppsala, Swed.
SOURCE: European Journal of Biochemistry (1994), 224(2), 309-16
CODEN: EJBCAI; ISSN: 0014-2956
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Rat, pig and human liver microsomes were found to catalyze 7α-hydroxylation of 25-hydroxycholesterol. In contrast to cholesterol 7α-hydroxylase activity, the 7α-hydroxylase activity towards 25-hydroxycholesterol in rat liver was not stimulated by cholestyramine treatment. After transfection with cDNA for human cholesterol 7α-hydroxylase, COS cells showed a significant activity towards cholesterol but not towards 25-hydroxycholesterol. During purification of cholesterol 7α-hydroxylase from pig liver microsomes, about 99% of the 7α-hydroxylase activity towards 25-hydroxycholesterol and 27-hydroxycholesterol was clearly separated from 7α-hydroxylase activity for cholesterol. The small amount of 25-hydroxycholesterol 7α-hydroxylase activity retained in a partially purified preparation of cholesterol 7α-hydroxylase was not inhibited by addition of cholesterol, indicating that the oxysterol binding site is different from the cholesterol binding site, presumably due to the presence of two different enzymes. It is concluded that different enzymes are involved in 7α-hydroxylation of cholesterol and 7α-hydroxylation of side-chain-oxidized cholesterol in rat, pig and human liver. Inhibition expts. with a partially purified fraction of the oxysterol 7α-hydroxylase from pig liver gave results consistent with the contention that the same enzyme is responsible for 7α-hydroxylation of both 25-hydroxycholesterol and 27-hydroxycholesterol. It has been suggested that cholesterol 7α-hydroxylase can preferentially use oxysterols , in particular 25-hydroxycholesterol, as substrates and by this means inactivate important physiol. regulators of cholesterol homeostasis. Such a mechanism would explain the unique property of the liver to resist down-regulation of the low-d.-lipoprotein receptor (Dueland, S. et al., 1993). The present results do not support the contention that the important coupling between cholesterol 7α-hydroxylase activity, the low-d.-lipoprotein receptor activity and hydroxymethylglutaryl CoA reductase activity in liver cells is due to inactivation of 25-hydroxycholesterol or 27-hydroxycholesterol by the action of cholesterol 7α-hydroxylase.

L14 ANSWER 13 OF 13 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1992:589055 CAPLUS
DOCUMENT NUMBER: 117:189055
TITLE: Expression of 7α-hydroxylase in non-hepatic cells results in liver phenotypic resistance of the low density lipoprotein receptor to cholesterol repression
AUTHOR(S): Dueland, Svein; Nenseter, Marit S.; MacPhee, Allan A.; Davis, Roger A.; Trawick, John D.
CORPORATE SOURCE: Dep. Biol., San Diego State Univ., San Diego, CA, 92182, USA
SOURCE: Journal of Biological Chemistry (1992), 267(32), 22695-8
CODEN: JBCHA3; ISSN: 0021-9258
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The goal of this study was to understand why the expression of low-d. lipoprotein (LDL) receptors by the liver is poorly down-regulated by cholesterol. The hypothesis was examined that

7α-hydroxylase may indirectly induce the expression of the LDL receptor by metabolizing, i.e. inactivating oxysterol repressors. Non-hepatic CHO cells, transfected with a plasmid encoding 7α-hydroxylase, expressed both the mRNA and functional activity of this liver-specific enzyme. In the presence of 5% serum, expression of the LDL receptor by transfected cells was >20-fold that of non-transfected cells despite a 50% increased content of cholesterol ester. Both cell types displayed an almost complete repression of the LDL receptor by the oxysterol 25-hydroxycholesterol, suggesting that transcriptional control of the LDL receptor gene remained intact in the transfected cells. However, only cells expressing 7α-hydroxylase showed a derepression of the LDL receptor with time. This transient sensitivity to 25-hydroxycholesterol repression was attributed to a 3-fold greater rate of metabolism of 25-[3H]hydroxycholesterol. The paradoxical induction of LDL receptor mRNA in transfected cells having greater amts. of cholesterol esters suggests that 7α-hydroxylase may preferentially use oxysterols rather than cholesterol as substrates. The combined data are consistent with the proposal that 7α-hydroxylase indirectly induces the LDL receptor gene by metabolizing (inactivating) oxysterol repressors. Liver-specific expression of 7α-hydroxylase can account for the relative resistance of hepatic LDL receptors to down-regulation.